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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,138	02/08/2001	Hirokazu Fujino	0020-4783P	5320

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EXAMINER

LEO, LEONARD R

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 05/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,138

Applicant(s)

FUJINO ET AL.

Examiner

Leonard R. Leo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claims 1-7 are pending.

Claim Rejections - 35 USC § 112

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification, as originally filed, fails to provide an adequate written description of the invention. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). It is unclear what the term "symmetric" in claims 1 and 6-7 are used by the claim to mean," while the accepted meaning is "correspondence of form and arrangement of parts on opposite sides of a boundary." There appears to be no line of symmetry along a pipe axis, in that, the rows of grooves having different widths are not identical.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al (10-47880). Ishikawa et al discloses the twist angles are 40 to 20 degrees and 15 to 90 degrees, respectively. The claim is clearly anticipated when the angles are the same.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (10-47880) in view of Takashi et al (11-90530).

Ishikawa et al (10-47880) discloses all the claimed limitations except the grooves of the first and second rows having the same.

Takashi et al (11-90530) discloses a heat-transfer pipe comprising a plurality of rows of grooves (Figure 5A) arranged in V-shaped patterns 62, 63 having the same angle for the purpose of achieving a desired heat exchange.

Since Ishikawa et al (10-47880) and Takashi et al (11-90530) are both from the same field of endeavor and/or analogous art, the purpose disclosed by Takashi et al (11-90530) would have been recognized in the pertinent art of Ishikawa et al (10-47880).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Ishikawa et al (10-47880) V-shaped patterns having the same angle for the purpose of achieving a desired heat exchange as recognized by Takashi et al (11-90530).

Regarding claims 2-3, Takashi et al (11-90530) discloses secondary grooves 52a extending in a spiral direction 53.

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Regarding claims 6-7, the similar structured device of the combination of Ishikawa et al (10-47880) and Takashi et al (11-90530) is believed manufactured in a manner similar and similar apparatus as applicants' instant invention as claimed. Figure 1 of Takashi et al (11-90530) is particularly pertinent.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (10-47880) in view of Takashi et al (11-90530) as applied to claims 1-3 and 6-7 above, and further in view of Shikazono et al.

The combined teachings of Ishikawa et al (10-47880) and Takashi et al (11-90530) lacks secondary grooves on the projected portions.

Shikazono et al discloses a heat-transfer pipe (Figure 30) comprising a plurality of rows of grooves arranged in V-shaped patterns 1004 and secondary grooves 1002U for the purpose of improving heat exchange.

Since Ishikawa et al (10-47880) and Shikazono et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Shikazono et al would have been recognized in the pertinent art of Ishikawa et al (10-47880).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Ishikawa et al (10-47880) secondary grooves for the purpose of improving heat exchange as recognized by Shikazono et al.

Response to Arguments

No further comments are deemed necessary at this time.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648.

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3743

May 5, 2002